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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/040,217	10/29/2001	Nobuo Miyachi	39064-10005	1912

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EXAMINER

THEISEN, MARY LYNN F

ART UNIT	PAPER NUMBER
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1732

DATE MAILED: 02/26/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/040,217

Applicant(s)

MIYACHI, NOBUO

Examiner

Mary Lynn F. Theisen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 13-29 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 13-29 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 3/4/2002, 10/31/200.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

1. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 14, 15 and 20 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

There is no antecedent basis for "said desired form" in claim 14 and 15

Claim 20 is indefinite because it is not clear if the phrases in the parenthesis are to limit the claim.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

4. Claims 13 and 29 are rejected under 35 U.S.C. 102(b) as being anticipated by Nien.

Nein discloses placing a biodegradable plastic composition in a press mold where it is heated and compressed into a shape and thereafter cutting to reshape.

5. Claims 13, 16 and 19-23 are rejected under 35 U.S.C. 102(b) as being anticipated by Rimsa et al. Rimsa et al disclose a composition of starch ester (acetate, propionate, diester), cellulose ester, filler (column 2, line 50) and plasticizer that is molded under

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heat and pressure (column 2, lines 65-67). The plasticizer is in an amount of 5-45 wt%(column 5, lines 61-62). The degree of substitution is 1.5-2.9 (column 3, lines 46-47). The amylose content of the starch is at least 50% (column 2, lines 37-39).

Claim Rejections - 35 USC § 103

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 13-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tanaka et al (5,693,786) in view of Rimsa et al.

Rimsa et al is described above. Tanaka et al disclose a composition of esterified, polyester-grafted starch with one or more additional polymers. The polymers include biodegradable polyesters and cellulose acetate. See column 6, lines 22-52. An ester plasticizer is also used (column 6, lines 63-67). The degree of substitution is 0.1 – 3.0 (column 2, lines 53-55). Organic and inorganic fillers may be used (column 7, lines 24-35). Tanaka et al teach that the composition is injection molded. It would have been obvious to one of ordinary skill in the art to use heat and compression in mold instead of injection molding because Rimsa et al show that these molding procedures are alternatives when molding esterified starch compositions.

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8. Claims 13-17, 19-23 and 25-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Narayan et al (5,728,824) in view of Rimsa et al.

Rimsa et al is described above. Narayan et al mix an esterified starch having a degree of substitution of 1.0 to 2.5 with cellulose microfibrils having a length of 100-600 μ and L/D of 6-12 (column 2, lines 30-39). The starch has at least 50% amylose (column 2, line 62). An ester plasticizer is used (column 4, lines 36-39). The composition is processed thermoplastically by molding, extrusion and thermoforming (column 1, lines 11-14). It would have been obvious to one of ordinary skill in the art to use heat and compression to mold the composition of Narayan et al because this is a conventional thermoplastic processing and Rimsa et al shows that it is equivalent to thermoforming and extrusion.

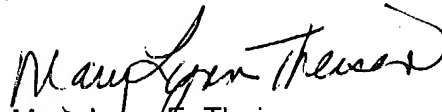
Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary Lynn F. Theisen whose telephone number is 571-272-1210. The examiner can normally be reached on Thursday and Friday 6:30-4:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Michael Colaianni can be reached on 571-272-1196. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Mary Lynn F. Theisen
Primary Examiner
Art Unit 1732

2/20/2004

mlt